(b) Climate

.132 [241]

According to Köppen's climatic classification (Köppen and Geiger 1930) the whole area falls within the Af category (humid tropical lowland), the uniformly high temperatures and rainfall providing a long growing season calculated by the CSIRO to be effectively twelve months in 9 years out of 10.

[821].

Two seasons, commonly referred to as 'wet' and 'dry', are definable in terms of wind direction, rainfall and humidity and are clearly recognised by the Orokaiva. The 'wet' season, from December to March, is characterised by north-easterly or north-westerly winds, high temperatures and humidities and late afternoon thunderstorms, while the 'dry' season, from May to October, experiences north-easterly winds, lower temperatures (particularly at night),[1] less cloud cover and more irregular rainfall, both in frequency and intensity.

The mean annual rainfall almost everywhere exceeds 100 inches, increasing inland to 157.6 inches at Awala on the lower slopes of Mt Lamington. The wettest and driest months are December and July respectively, the precipitation ratio between the two being in the range of 5:1 or 5:2. The rainfall pattern is not strongly seasonal by Papua-New Guinea standards and the element of seasonality decreases from the coast inland, from a coefficient of seasonal variation of 0.34 at Buna to 0.27 at Awala. Further, the deviations from the mean reveal that there is only a moderate variability of rainfall; nevertheless it (as revealed in Table 1:1) has considerable bearing on the rhythm of agricultural activities and economic life in general. While the pattern of food production clearly varies with the two dominant seasons,[2] the time-consuming tasks of clearing bush and establishing new gardens show no definite pattern other than a close association with the occurrence of dry periods. Thus the availability of labour and its application demand some flexibility to accord with the vagaries of weather.

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[1] Mean maximum temperatures over the year are in the range of 83° to 88°F., relative humidity at 9 a.m. is 80 per cent falling to 72 per cent at 3 p.m., and mean minimum temperatures are from 65° to 70°F. These figures are derived from observations made at Sivepe on the lower slopes of Mt Lamington. Temperatures can be assumed to be 5°F. higher at the coast and the diurnal range slightly less.

[2] Distinguished by the Orokaiva as gerepa - the wet season - when the staple taro (Colocasia) is in production, and huvira - the dry season - when the people must resort to sago, breadfruit and less favoured foods.

[821] [262]

121 these changes have had on the physical environment, especially topography and natural resources.

Section 2: Climate

132 The temperature varies between 70° and 90°F. throughout the year, both in Sivepe and Inonda. The Inonda people think that the nights at Sivepe (and on the mountain generally) are rather cold and it is true that in Inonda night temperatures are noticeably higher. The temperature also fluctuates slightly with the season, being higher just before and during the wettest season, i.e., from [821] September to February. The Orokaiva like the sun to shine strongly. They think a strong sun heals the sick and they like working in [789] the sun. One recurring theme in spells to improve the growth of taro is that the sun should shine strongly. This puzzled me a little at first, but students of swidden agriculture seem to be agreed that the fertility of the gardens depends considerably upon the dryness of the weather during the period when gardens are cleared and the felled vegetation burnt. (See, for instance, Geertz, 1966: 22-23.)

Rainfall varies considerably from place to place, month to month and year to year. I have quoted some data, for Popondetta and Awala, extending over a number of years. Inonda rainfall is somewhat below that of Popondetta; Sivepe rainfall is significantly higher than at Awala. Thus Inonda usually gets 80 to 90 inches of rain per year while Sivepe gets at least 200 (Tables 3 and 4). Europeans tend to divide the year into a "wet" and a "dry" season. [821] This is not a very accurate division and Orokaiva do not use it. It rains some days in every month and the notion of a dry season can be arrived at only statistically; it will then be seen to fall in June-August at Awala and Sivepe; in May-September at Popondetta and Inonda. This dry period, for the Orokaiva, is the clearing [241] and planting period par excellence. The Orokaiva know that the best harvests occur if it rains little during this operation. They may not be able to explain this by the fertility gained from the ash (they think it is the sun that gives the fertility during planting) but one does notice a certain sense of urgency at this time of year to attend to clearing and planting.

In October the heaviest rains begin and this is the period 132 when crops grow fastest. Thus the crops planted during the dry 241 period are apt to develop particularly well while crops planted earlier are able to mature. It is true that planting and harvesting continue for most of the year but the rainfall variations do influence the yield of taro planted at different seasons; hence the Orokaiva do have a clear notion of optimal seasons for certain operations. The dry period is the optimal planting period, while the months preceding are the period of optimal harvest.

753 of traditional enemies, in territory which had always been regarded
731 as hostile and dangerous. Keesing furthermore reports that "these
mountain people apparently could not conquer a fear of the sea, and
821 this was reinforced by a rumour that a supernatural "tidal wave" was
to occur along the coast. The camp director told how every night the
more timid scattered on to the higher ground rather than sleep in the
camp on the foreshore."

There is no record that any fears continued after the people were resettled on their own lands. For instance, they ate the products of their land without regard to the fact that they had been scattered by volcanic ash.

164 The abrupt change in diet which occurred in the evacuation
262 camp seems to have had no injurious effects and aroused no great
731 concern. The people liked the rice and meat rations they were given.
After awhile they began to long for their own food. Their expeditions
to their home villages enabled them to collect at least some taro for
themselves.

128 I shall discuss the general health problems of the Orokaiva and government and mission health measure in subsequent chapters.